R E P O R T R E S U M E S

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AN EVALUATION OF THE KINDERGARTEN TEACHER-ASSISTANT PROJECT--PROJECT II.

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THE ADDITION OF A TEACHER-ASSISTANT (TA) PROVIDED A RICHER ENVIRONMENT AND CURRICULUM RESULTING IN A HIGH LANGUAGE PROFICIENCY GAIN FOR THE CULTURALLY DEPRIVED KINDERGARTENER. AFTER SIX ORIENTATION SESSIONS AND A WEEK OF OBERVATION, A TA WAS ASSIGNED AS A SECOND TEACHER TO ONE OF THREE MORNING AND THREE AFTERNOON KINDERGARTEN SESSIONS AT THE THREE ELEMENTARY SCHOOLS FOR 6 WEEKS. A LANGUAGE AND SPEECH EVALUATION TEST AND A DRAW-A-MAN TEST WERE ADMINISTERED TO EACH CHILD BEFORE AND AFTER THE PROJECT. DAILY LOGS WERE KEPT ON THE ACTIVITIES OF CHILDREN IN SMALL AND LARGE GROUPS. TWO KINDERGARTEN TEACHERS NOT INVOLVED IN THE PROJECT ANALYZED THE LOGS FOR ACTIVITIES THAT TOOK PLACE IN THE EXPERIMENTAL CLASSROOM, AND CONTRIBUTIONS OF THE ACTIVITIES TO CULTURALLY DEPRIVED ENRICHMENT PROGRAMS. THE ANALYSIS INDICATED THAT THE ADDITION OF A TA RESULTED IN (1) MORE SMALL GROUP ACTIVITIES, (2) MORE TIME FOR TEACHER OBSERVATION AND NOTE-TAKING DURING INSTRUCTIONAL PERIODS, (3) MORE INDIVIDUAL CONTACT WITH CHILDREN, (4) MORE CHILD-TO-CHILD INTERACTION IN SMALL GROUPS, (5) MORE EFFICIENT HANDLING OF CLASSROOM ROUTINES, (6) MORE ATTENTION TO THE CHILD'S LANGUAGE DEVELOPMENT, AND (7) INCREASED USE OF TESTING AND ACADEMIC-TYPE ACTIVITIES. PRE- AND POST-TEST RESULTS OF THE LANGUAGE AND SPEECH EVALUATION AND DRAW-A-MAN TEST SHOWED STUDENT PROGRESS IN LANGUAGE DEVELOPMENT, OBJECT NAMING, AND WHOLE-PART PERCEPTIONS. SINCE THE PROJECT LACKED A CONTROL GROUP, THE GAINS CANNOT BE ATTRIBUTED EXCLUSIVELY TO THE ADDITION OF A TA. HOWEVER THE COMBINATION OF VARIABLES (TEACHER GOALS, CURRICULUM, SCHOOL ENVIRONMENT) PRODUCED STATISTICALLY SIGNIFICANT RESULTS IN THE DIRECTION ANTICIPATED. (JB)

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PROJECT II: AN EVALUATION OF THE KINDERGARTEN TEACHER-ASSISTANT PROJECT,

PROPOSAL NO. 43-370-02-0104

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ACTIVITY REPORT: USE OF ASSISTANT-TEACHER IN SELECTED KINDERGARTEN CLASSROOMS

Project No. 43-370-02-0104

1. Description of Specific Objectives

   a. To increase the child's range of experience

   b. To increase his ability to communicate

   c. To help him perceive the adult (teacher) as an information-giving person

   d. To help him develop positive attitudes toward school as a place to learn

   e. To increase his ability to conceptualize

   f. To increase his ability to listen in a sustained manner

   g. To increase his sense of self-worth

   h. To develop an interest in learning about the world around him

   i. To develop his ability to exert initiative in the learning process and deepen his social skills

   j. To establish expectations of reward from accumulation of knowledge and from task completion

   k. To develop the ability to delay gratification

   l. To learn to handle his emotions in positive and constructive ways

   m. To develop physical skills appropriate to his age level.

2. The activity consisted of placing a second teacher in each of six kindergarten sessions, chosen on the basis of the numbers of 1965 Project Head Start children attending neighborhood schools. This second teacher (not an aide) assisted with the mechanics of the kindergarten program and her presence allowed for the following:

   LANGUAGE ARTS:

   a. Increased opportunities to communicate with others

   b. Small groups to go on exploratory trips, or the whole class to take field trips

   c. Increased records, stories, rhythms, poetry

   d. Additional small group listening activities

   e. Additional opportunities to handle the materials of science--feel, smell, taste

   f. Increased sorting, classifying, and organizing activities.

WORK PERIOD:

a. More individualized help with construction projects

b. Increased development of problem-solving

c. Increased structuring of the environment to facilitate all kinds of learnings.

MUSIC:

a. Investigation of instruments in small groups

b. Dancing for small numbers of children

c. Writing original songs, poems

d. Rhythm bands.

ART:

a. Increased finger painting opportunities

b. Increased experimentation and manipulation of the tools of art

c. Specific skill development.

PHYSICAL ACTIVITIES:

a. Greater freedom of movement from outdoors to indoors

b. Development of skills in movement exploration.

3. The Time Interval

This activity started on January 12 with pre-planning sessions, first by a District-wide committee and then by the first of a series of sessions with the kindergarten teachers involved.

Six planning sessions with the teachers preceded the week of observation and orientation for the assistant teachers. These sessions were conducted by Mrs. Ruthe Lundy, Elementary Consultant, and Mrs. Betty Rogaway, Consultant, Family Life Education. The assistants were in the classroom from March 8 to June 17 for regular kindergarten sessions, three in the morning and three in the afternoon.

The program hoped to achieve many of the specific objectives by adding an additional teacher so that individual and small groups of children could be worked with more frequently and, thus, achieve the goals of the program.

The first stage of the evaluation of the project looks directly at what happened in the classrooms to determine how successful the teachers were in modifying their programs to work towards the specific objectives. The second section of the evaluation deals with a measure of possible change in the individual children in a before and after speech and draw a man evaluation.

4. Analysis of Classroom Activities

To evaluate the effectiveness of adding an additional person to the kindergarten classroom, teachers were asked to keep records of the specific daily classroom experiences during the period of the study (see attached form). These activities were grouped into three general areas--1) Communication, 2) Physical, and 3) Arts and Fine Arts experiences. Teachers were asked to record experiences planned for individual and small groups of youngsters (particularly the Head Start children), as well as those for the entire group on these forms. Each of the three teachers involved in this study kept daily logs for this purpose.

The logs were analyzed independently by two kindergarten teachers not involved in the study, as well as members of the research department. In general there was high agreement among the raters who read the observation records. The evaluation discussed below is a result of these independent analyses.

The two kindergarten teachers were asked to read the logs 1) to determine activities that took place in the experimental classrooms that did not take place in <u>their</u> regular classrooms without an extra person and 2) to evaluate the desirability of the reported activities as they relate to the goal of providing a rich program for the so-called culturally deprived without weakening the regular program. The research department tabulated the experiences recorded on the logs into the following categories:

COMMUNICATIONS: Small Group Visits, Sharing Experiences, One-to-One Child-to-Child Experiences, One-to-One Teacher-to-Child Experiences, Academic Learning, Problem Learning Experiences, Behavior Problems, Encouragement to Join Group, and Visitors.

ARTS AND FINE ARTS: College or Cutting and Pasting, Dramatic Play, Construction, Pottery, One-to-One Child-to-Child, Movies, One-to-One Teacher-to-Child, Group Sharing, Music and/or Dance, Encouragement to Join, Special Lessons, Cooking, Expression or Behavior Problems, Painting and Drawing, Actual Mention of Small Group, and Walks and Trips.

PHYSICAL EXPERIENCES: Exercise, Mention of Small Groups, Tumbling, Walking and Trips, Discrimination and Small Motor Control, Cooking, Behavior and Expression Problems, One-to-One Teacher-to-Child, Dramatic Play (Organized), Planting, Indoor Games, Dance, Sciencemobile, Gross Motor Coordination, Bikes, Dramatic Play (Free), Experience Learning, Sandbox, Special Skills, and Sharing.

These results are presented in Tables I-III below. The data presented in these tables clearly demonstrate that many of the activities that generally are believed to build communication and conceptualizing skills were provided by the teachers in the classrooms.

Analysis of the Logs

One. One of the major findings of this analysis is that the experimental teachers were able to deal with small groups of children far more frequently than the non-experimental teachers felt they were able to manage when working alone in their classrooms. The experimental teachers were able to plan for small groups of children on field trips, group science demonstrations, cooking sessions, dramatic play, reading of stories, sharing experiences, and writing of stories and letters. Many of the activities were similar to those which take place in the regular program; however, a major exception exists. When one teacher works alone, she must involve the whole class in these activities and, consequently, cannot provide an opportunity for all children to ask questions, supply answers, take turns, and arrive at understandings. Even though small group science demonstrations may

take place in a regular classroom, when the teacher is alone she still has the responsibility for supervising the rest of the class. The extra person in the experimental classes was able to assume this supervisory role and thereby give the teacher more time and freedom to carry on small group discussions and provide more time for individual pupil responses.

Two. The teachers also recorded in their logs that the extra teacher was able to take notes more adequately and follow up the experiences more efficiently due to the fact that one teacher conducted the lesson while the other observed and studied the children's participation and reactions. Both of the kindergarten teachers who read the logs agreed that this would be an invaluable addition to any kindergarten program and particularly when there are more than an average number of children who need special remedial help such as the economically deprived youngsters. Thus, during the regular "work sessions" in the kindergarten when the class divides up into many activities, two individuals are able to observe, raise questions, aid individuals and groups, develop concepts and take notes for future sessions far more adequately than one teacher is able to do in a classroom of 30 children.

Three. The third major finding is that two teachers provided far more individual contact with children than is normally possible. This has greatly increased opportunities for verbal interaction and language development. As well, it has provided more opportunities for one-to-one contact of teachers with children which the teachers feel has aided in building the children's concept of themselves. This was accomplished through the teacher's support of the child's work and ideas, as well as the added opportunities for the teacher to demonstrate the necessary individual expression of warmth and acceptance that is sometimes not possible in a classroom with 30 five year olds. Each teacher who read the logs felt that this was a major achievement of the extra teacher program.

Four. Indirectly, the first finding, the increased activity of small groups, leads to the fourth major finding. There appeared to

be more opportunities for children to interact with other children due to the greater amount of small group activities. Large group activities demand tighter control and less child-to-child interaction. The increase in the number of small group activities has led to more opportunities for children to learn from and to interact with their peers.

Five. Due to the fact that the teacher was able to observe more, she also was able to reinforce positive behavior and actual learning accomplishment more rapidly and more frequently. Both are desirable learning procedures. In addition, the teacher working with smaller groups was able to check on concept mastery of individual children rather than groups. She also was able to check on coordination and audio-visual discrimination more frequently and more accurately than she felt she was able to do with larger group discussion and work sessions.

Six. On a different level, another major finding dealt with the routines of the classroom. These appeared to be handled more efficiently with two persons than with one. With an extra person in the classroom there were two adults to share rabbit feeding assignments, fish bowl cleaning, film rewinding, name tag pinning, handing out paintings, supervision of walks to the projection room, in helping with lumber tools, in helping with finger painting and clay, etc. All of these are part of teaching, and sharing with another adult greatly reduces the amount of time the teacher spends in routinized tasks. In addition, the helper phoned and arranged field trips, contacted mothers, arranged for resource personnel, accompanied a sick child home, and performed other similar tasks.

Seven. Both kindergarten teachers who read the logs felt that the addition of a second person in the class did not necessarily insure a richer or "better" program for the culturally deprived. They noted that care must be taken to provide a program that offered opportunities for these children to grow in self-discipline, as well as develop an increasing sense of self-worth. These goals could be achieved by increased interactions with adults and peers and through increased

opportunities for verbal language development. As noted above, these activities did take place.

Eight. However, all aspects of the teacher-aide system were not viewed with the same enthusiasm. It was felt that the presence of an extra person may create a desire to administer achievement and diagnostic tests beyond what is necessary for planning educational experiences for this age child. Also, some activities of an "academic" nature such as learning colors, naming objects and learning left to right progression, and counting were increased. Questions by the non-experimental teachers were raised as to the value of increasing these activities. Both of the teachers who reviewed the logs were of the opinion that a kindergarten program for the culturally deprived should have as its main force the general kindergarten environment. They felt that it is less beneficial to supply routine practice exercises such as learning colors to a child who has suffered cultural deprivation than to provide verbal interactions and problem-solving activities. In fact, they were of the opinion that spending time on drills of this nature may actually contribute to the retardation of the child. They have found in their own experience little value in dwelling on a child's difficulty which could be alleviated through the general aculturation process. This process should be stimulated by a program which takes place in a full, rich environment. However, these speculations are beyond our data and will need verification.

Summary of Analysis of Classroom Activities

Based on the analyses of the daily logs recorded by three kindergarten teachers who had a full-time teacher-aide to assist them, positive benefits were found in

a. a larger number of small group activities
b. more time for observation and note taking of individual children and groups by the teacher
c. more time for individual contact with children
d. more time for child-to-child interaction in small groups
e. a more efficient handling of routines
f. more attention to language development of the culturally deprived child.

A possible negative result was noted in a tendency to provide more drill activities and to administer tests beyond what may be neccessary for this age child.

Based on these conclusions, it is recommended that the program be continued, particularly for large classes and ones which contain a number of culturally deprived children.

5. Child Data

A speech therapist administered a complete speech and language evaluation and a Draw a Man Test to all children in the kindergarten classes before the program began and at the end of the project. Although the time interval is too short to demonstrate major results, an analysis was made to determine if changes had been made that could be attributed to the program.

The speech evaluation included an assessment of the child's Spontaneous Verbal Fluency, Gesture Language, Eye Contact, English as a Second Language, Non-fluency Problems, and Articulation Difficulties. In addition, the child was asked to name a series of objects. A count of the number of objects he was able to successfully identify was tabulated. A Language and Speech Evaluation Test was prepared by Mrs. Ruth Jackson, Coordinator of the Speech and Hearing Department, especially for this project. A copy of the scales are attached in the Appendix.

Results

The over-all results are presented in the table below.

Number of Children Who Gained On
Pre- and Post-Tests

Test	N	Gain	Loss	X^2	p Value
Objects	116	92	24	21.85	<.001
Draw A Man	132	81	51	13.64	<.01
Language Test	126	123	3	73.87	<.001

As we can see, the results indicated that statistically significantly more children made gains on all three tests than would be expected by chance alone.

Discussion

The absence of a control group with which to compare these results makes it difficult for us to attribute these gains to the addition of an extra teacher alone. However, the results are positive enough for us to gain support for the total program which would include the teachers, their goals, curriculum, and school environment. Experiments such as these in a naturalistic setting are multivariate in nature, and we can only assume that the combination of variables produced statistically positive results in the direction we had predicted.

The gain in language proficiency as indicated by the Language Test is a most encouraging support of moving towards the objectives as stated earlier in this report.

Summary

In attempting to provide a richer environment and curriculum for culturally deprived kindergarten children an extra teacher was hired for six sessions of kindergarten in three different elementary schools. Both morning and afternoon sessions of kindergarten were included.

A complete language and speech evaluation and Draw a Man Test were administered to each child before and after the project. Each teacher kept daily logs recording the activities of small and large groups of children. The results indicate a positive gain in speech and language development and Draw a Man Test by a statistically significant number of children. An analysis of the logs reveals positive gains in implementing a program desired by the goals listed for the program.

Table I

Communication

Types of Experience	Number of Times Mentioned		
	I	G	Total
1. Encouragement to Join Group	10	--	10
2. Visitors	--	11	11
3. One-to-One Experiences Child-to-Child	47	16	63
4. Behavior Problems, Discipline Fighting (most revolved around the one child)	57	6	63
5. Small Group Visits	35	30	65
6. One-to-One Experiences Teacher-to-Child	79	5	84
7. Problem Learning Experiences	96	28	124
8. Sharing Experiences One-to-Group Relationships	62	64	126
9. Academic Learning	168	21	189

I = Individual Children

G = Entire Group

Table II

Arts and Fine Arts

Types of Experience	Number of Times Mentioned		
	I	G	Total
1. Group Sharing Interaction One-to-Group	--	1	1
2. Expression or Behavior Problems	1	--	1
3. Movies	--	3	3
4. Encouragement to Come into the Group	6	--	6
5. One-to-One Teacher-to-Child	6	2	8
6. One-to-One Child-to-Child	7	2	9
7. Walks and Trips	3	7	10
8. Dramatic Play	9	5	14
9. Special Lessons (i.e., Easter egg dye, etc.)	5	9	14
10. Construction	1	14	15
11. Cooking	3	13	16
12. Collage or Cutting and Pasting	7	10	17
13. Pottery, Modeling Clay	5	12	17
14. Mention of Small Group	7	16	23
15. Painting and Drawing	17	26	43
16. Music and/or Dance	20	37	57

I = Individual Children

G = Entire Group

Table III

Physical Experiences

Types of Experience	Number of Times Mentioned		
	I	G	Total
1. Planting	--	2	2
2. Sharing	3	--	3
3. Discrimination and Small Motor Control (copy shapes, etc.)	5	--	5
4. Sciencemobile	3	2	5
5. Experience Learning	4	2	6
6. Walking and Trips	--	7	7
7. One-to-One Teacher-to-Child	8	--	8
8. Indoor Games	2	7	9
9. Behavior and Expression Problems	10	--	10
10. Exercise	4	8	12
11. Cooking	5	7	12
12. Bikes	2	10	12
13. Sandbox	4	8	12
14. Dance	13	5	18
15. Tumbling	22	2	24
16. Special Skills (construction, batons, etc.)	7	21	28
17. Dramatic Play - Organized	9	23	32
18. Dramatic Play - Free	4	36	40
19. Mention of Small Group	34	13	47
20. Gross Motor Coordination (jump, climb, punchbag, etc.)	71	17	89

I = Individual Children

G = Entire Group